

30. **(Reiterated)** The delivery vector of claim 29, wherein said delivery vector comprises a virus or retrovirus.

A2 31. **(Amended)** The delivery vector of claim 30, wherein said virus or retrovirus is selected from adenoviruses, adeno-associated viruses, herpes simplex viruses, human immunodeficiency viruses, or vaccinia viruses.

32. **(Reiterated)** Transfected cells comprising target cells which have been exposed to the delivery vector of claim 29.

A3 33. **(Amended)** The transfected cells of claim 32, wherein the cells are selected from blood cells, skeletal muscle cells, stem cells, skin cells, liver cells, secretory gland cells, hematopoietic cells, or marrow cells.

34. **(Amended)** A pharmaceutical preparation comprising a pharmaceutically acceptable excipient and the chimeric polypeptide encoded by the nucleic acid of claim 28, 49, or 50.

48. **(Amended)** A method for modulating one or more of cell proliferation, cell differentiation, and cell death in an organism, comprising:

- A4
- (i) providing a delivery vector comprising genetic material which encodes the chimeric polypeptide of claim 1, 2, or 3; and
 - (ii) introducing said vector into target cells in vivo, under conditions sufficient to induce said target cells to express said polypeptide.
-

Please add the following new claims:

Sub C4 49. ✓ **(New)** A nucleic acid encoding a chimeric polypeptide having the structure A-B-C, wherein:
A represents an N-terminal peptide fragment of serum albumin (SA) terminating in an amino acid corresponding to one of residues 359-368;
B represents a biologically active heterologous peptide sequence; and,
C represents a C-terminal peptide fragment of SA beginning from an amino acid corresponding to one of residues 361-370;

wherein A and C do not include overlapping portions of the regions 360-369 and 450-463.

- Sub C4
50. (New) A nucleic acid encoding a chimeric polypeptide having the structure A-B-C, wherein:
A represents an N-terminal peptide fragment of serum albumin (SA) terminating in an amino acid corresponding to one of residues 449-462;
B represents a biologically active heterologous peptide sequence; and,
C represents a C-terminal peptide fragment of SA beginning from an amino acid corresponding to one of residues 451-464;
wherein A and C do not include overlapping portions of the regions 360-369 and 450-463.
51. (New) The nucleic acid of claim 28, 49 or 50, wherein the heterologous peptide sequence comprises a fragment of an angiogenesis-inhibiting protein or polypeptide. 3
52. (New) The nucleic acid of claim 51, wherein said angiogenesis-inhibiting protein or polypeptide is selected from angiostatin, endostatin, and peptide fragments thereof.
- Sub C5
53. (New) The nucleic acid of claim 28, 49 or 50, wherein the heterologous peptide sequence binds to a cell surface receptor protein. 3
54. (New) The nucleic acid of claim 53, wherein the receptor protein is a G-protein coupled receptor.
55. (New) The nucleic acid of claim 53, wherein the receptor protein is a tyrosine kinase receptor.
56. (New) The nucleic acid of claim 53, wherein the receptor protein is a cytokine receptor.
57. (New) The nucleic acid of claim 53, wherein the receptor protein is a MIRR receptor.
58. (New) The nucleic acid of claim 53, wherein the receptor protein is an orphan receptor.
59. (New) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide binds to an extracellular receptor or an ion channel. 3

60. (New) The nucleic acid of claim 59, wherein the chimeric polypeptide is an agonist of said receptor or ion channel.
61. (New) The nucleic acid of claim 59, wherein the chimeric polypeptide is an antagonist of said receptor or ion channel.
62. (New) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide induces apoptosis.
63. (New) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide modulates cell proliferation.
64. (New) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide modulates differentiation of cell types.
65. (New) The nucleic acid of claim 28, 49 or 50, wherein the heterologous peptide sequence comprises between 4 and 400 residues.
66. (New) The nucleic acid of claim 28, 49 or 50, wherein the heterologous peptide sequence comprises between 4 and 200 residues.
67. (New) The nucleic acid of claim 28, 49 or 50, wherein the heterologous peptide sequence comprises between 4 and 100 residues.
68. (New) The nucleic acid of claim 28, 49 or 50, wherein the heterologous peptide sequence comprises between 4 and 20 residues.
69. (New) The nucleic acid of claim 28, 49 or 50, wherein the tertiary structure of the chimeric polypeptide is similar to the tertiary structure of native SA.
70. (New) The nucleic acid of claim 28, wherein the inserted peptide sequence replaces a portion of native SA sequence.
71. (New) The nucleic acid of claim 70, wherein the inserted peptide sequence and the replaced portion of native SA sequence are of unequal length.

Sub
Cb

72. (New) The nucleic acid of claim 28, 49 or 50, wherein the half-life of the polypeptide in the blood is no less than 14 days. 3

73. (New) The nucleic acid of claim 28, 49 or 50, wherein the half-life of the polypeptide in the blood is no less than 10 days. 3

74. (New) The nucleic acid of claim 28, 49 or 50, wherein the half-life of the polypeptide in the blood is no less than 50% of the half-life of native SA. 3

Sub C7
75. ✓ (New) A nucleic acid encoding a chimeric polypeptide comprising serum albumin (SA) having at least two biologically active heterologous peptide sequences inserted therein, wherein at least one biologically active heterologous peptide sequence is inserted (i) between an N-terminal SA sequence ending in one of residues 359-368 and a C-terminal SA sequence beginning from one of residues 361-370; or (ii) between an N-terminal SA sequence ending in one of residues 449-462 and a C-terminal SA sequence beginning from one of residues 451-464; wherein the N- and C-terminal sequences do not include overlapping portions of the regions 360-369 and 450-463.

76. (New) The nucleic acid of claim 75, wherein the heterologous peptide sequences are identical.

77. (New) The nucleic acid of claim 75, wherein the heterologous peptide sequences comprise distinct sequences of a protein.

78. (New) The nucleic acid of claim 75, wherein the heterologous peptide sequences comprise sequences from at least two different proteins.

79. (New) The nucleic acid of claim 28, 49 or 50, wherein the biologically active heterologous peptide is the myc epitope or the RGD peptide. 3

ADD C8

The claims presented above incorporate changes as indicated by the marked-up versions below.

28. (Amended) A nucleic acid encoding [the] a chimeric polypeptide [of claim 1, 2, or 3] comprising serum albumin protein (SA) having a biologically active heterologous peptide

sequence inserted into at least one region selected from residues 360-369 and residues 450-463, optionally replacing one or more residues of the region into which it is inserted.

29. (Amended) A delivery vector comprising the nucleic acid of claim 28, 49, or 50.
31. (Amended) The delivery vector of claim 30, wherein said virus or retrovirus is selected from [the group consisting of] adenoviruses, adeno-associated viruses, herpes simplex viruses, human immunodeficiency viruses, or vaccinia viruses.
33. (Amended) The transfected cells of claim 32, wherein the cells are selected from [the group consisting of]blood cells, skeletal muscle cells, stem cells, skin cells, liver cells, secretory gland cells, hematopoietic cells, [and]or marrow cells.
34. (Amended) A pharmaceutical preparation comprising a pharmaceutically acceptable excipient and the chimeric polypeptide encoded by the nucleic acid of claim [1, 2, or 3]28, 49, or 50.
- 4[7]8. (Amended) A method for modulating one or more of cell proliferation, cell differentiation, and cell death in an organism, comprising:
- (i) providing a delivery vector comprising genetic material which encodes the chimeric polypeptide of claim 1, 2, or 3; and
 - (ii) introducing said vector into target cells *in vivo*, under conditions sufficient to induce said target cells to express said polypeptide.

REMARKS

In reply to the outstanding Restriction Requirement, mailed October 2, 2001, in connection with the above application, Applicants hereby elect Group II with traverse, based on the reasons which follow. The time period for response has been extended to January 2, 2002, by the accompanying petition for a two-month extension of time.

Applicants have amended claims 28, 29, 34, and 48, and have added new claims 49-83. Applicants submit that these claims (except claim 48) all belong to Group II. Claims 49 and 50